Remittances, Institutions, and Economic Growth: The Case of the European Union

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Abstract

Theoretical and empirical research on the impact of remittances on the economy has produced very different results. International remittances stimulate economic growth for many countries, mainly by increasing national disposable income. The paper empirically investigates the role of remittances and institutions in the economic growth of the 27 member states of the European Union (EU) from 1995-to 2019. The selected group of countries includes countries from different levels of economic development and countries from the former socialist system, countries that are in transition, countries that have successfully overcome that process, and traditionally capitalist countries with different quality of institutions. Using the generalized method of moments (GMM) in a data analysis panel, we found evidence that institutions play an essential role in how remittances affect economic growth. It has been found that a healthy institutional environment affects the volume and efficiency of investments; hence, in the presence of good institutions, remittances could be channeled more efficiently, which will eventually lead to greater output. The paper also proves that with better institutional quality in the country, the effect of remittances and other economic and financial activities is more pronounced. Thus, to the extent that policies that promote greater freedom of economic activity are promoted, national economies will benefit more from remittances.

Keywords: Remittances, institutions, economic growth, GMM, EU.

JEL Codes: E02, F24, F43.

1. INTRODUCTION

Theoretical and empirical research on the impact of remittances on the economy has produced very different results. On the positive side, remittances help alleviate poverty and, in some cases, provide capital to finance investments and household savings. International remittances stimulate economic growth for many countries, mainly by increasing national disposable income. For many low-income countries and countries with net emigration, remittances are the most important source of external funding and official development assistance (Catrinescu

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et al., 2009). However, some studies have shown that remittances can have a negative effect on economic growth in the medium and long term. Remittances can spur inflation, disrupt the foreign trade sector by appreciating the real exchange rate, and reduce labor market participation rates if remittance household members decide to make a living from migrant transfers instead of work (Le, 2009) and (Kim, 2007). In addition, remittance contributions to growth and poverty may reduce incentives to pursue sound macroeconomic policies or introduce the necessary structural reforms (Adams and Page, 2005).

Regarding the favorable impact of remittances on the economy, there is empirical evidence that remittances lead to positive economic growth through their effect on consumption, savings, or investment. Mundaca, (2009), analyzes the impact that workers' remittances and financial intermediation have on the economic growth of the case in Latin America and the Caribbean. Remittances have been shown to have significant positive long-term effects on growth. The author further concludes that more accessible financial services should lead to better utilization of remittances, which will stimulate the growth of these countries. Lartey, (2013), analyzes the relationship between remittances and per capita growth and investigates whether the impact of remittances on growth is through capital accumulation or other mechanisms. He uses data from sub-Saharan Africa and dynamic empirical models. He finds a positive relationship between remittances and growth and a positive interaction effect between remittances and financial growth depth. The results also provide evidence of an investment channel through which remittances affect growth.

Our paper analyzes the impact of remittances on economic growth through the complex and neglected channel of institutional quality of the remittances receiving country in the case of European Union (EU) countries, using the Generalized Method of Moments (GMM). As we have said before, there is considerable debate about the relative contribution of remittances from migrants to the economic development of the host country. Research does not agree on whether remittances positively or negatively impact long-term growth. This paper considers that the institutional capacity of the recipient country is one of the virtual channels through which the effects of remittances on economic growth are transferred. To avoid the bias that can be created due to a missed variable, this paper examines the remittance-growth relationship of the case in EU countries through the impact of institutional quality. The expected result is an increase in the contribution of remittances to economic growth in countries with more efficient and better political and economic institutions.

Catrinescu et al., (2009), on a sample of 162 countries, found that the claim that remittances had a negative impact on growth could be rejected and that there were some indications of a positive, albeit mild, effect. In addition, both conceptual and empirical analyses suggest that institutions can play a role in how remittances affect economic growth. It has been established that a healthy institutional environment affects the scope of investment efficiency; hence, in the presence of good institutions, remittances could be invested in more significant amounts and more efficiently, which would eventually lead to greater output. The study by Borja and Hall, (2018), provides new evidence for the potential reduction of income inequality driven by remittances and the quality of institutions. For example, weak institutions discourage the use of remittances for productive endeavors, especially among poorer families. On the other hand, medium- and high-income groups tend to be willing to reduce their exposure to damage to weak institutions. Using a set of 25 institutional indicators, the authors find that remittance recipients with better institutions significantly reduce income inequality.

Our analysis is on the case of the 27 member states of the European Union. Although the criteria for entry and EU membership are the same and binding for all countries, there are still some specifics and differences between stakeholders. The selected group of countries includes countries from different levels of economic development, countries from the former socialist system, countries that are in transition, countries that have successfully overcome that process, and traditionally capitalist countries. The width and variety of the sample are an advantage when performing statistical calculations and allow obtaining statistically significant results.

From 2013-to 2017, the EU was the net recipient of remittances worldwide. This meant that the net transfers sent by migrants to the EU in their home economies were lower than the net incomes of EU citizens working abroad. The balance of personal remittances increased from 5.3 billion euros in 2013 to 9.8 billion euros in 2014. Net inflows in employee benefits reached 22.5 billion euros, and net outflows in personal transfers were only 12.6 billion euros. This trend was reversed in the following years, with a decrease in net inflows from employee benefits and increased net outflows from personal transfers.

Consequently, the balance of personal remittances became negative in 2018, assuming a deficit of 2.5 billion euros. The net income inflows generated by EU citizens through their work abroad increased from 16.3 billion euros in 2018 to 19.7 billion euros in 2020. Net outflows in personal transfers from migrants to their home economies are dynamically increasing from € 12.6 billion to € 22.1 billion in 2020, 175% of the 2014 level. As net inflows of employees increase and net outflows in personal transfers decrease from 2018 at a similar pace, the personal remittance deficit has remained relatively stable at -2.4 billion euros in 2020. Due to the pandemic caused by the Covid-19 disease and its disruptive effects on the economy, the last years have not been included in the analysis.

The rest of the paper is organized as follows: Section 2 presents a specific empirical background on the relationship between migrant remittances and economic growth through various channels and institutions. Section 3 presents the data, the methodology of the empirical research, and the results. The last section gives a brief overview of the empirical research, and the results are commented on to improve the policies for more productive use of the received remittances.

2. LITERATURE REVIEW

Empirical studies explain the impact of remittances on economic growth based on various theories and models. According to Jushi et al., (2021), there are three main theories regarding the impact of remittances on development. The first theory has an optimistic view of the impact of remittances on economic growth, the second theory has a pessimistic view, and the third theory emphasizes that remittances do not have a strictly positive or negative impact on economic growth, but this relationship is much more complex. Given the empirical literature and based on different theories, we believe that remittances are one of the essential factors that positively impact economic growth. However, it still depends on their use in specific countries and regions. We are testing this impact in the case of European Union countries.

Also, according to Rao and Hassan, (2012), some papers examine remittances' direct and indirect short-term and long-term impacts on economic growth. But this is very different from reviewing the indirect macroeconomic effects of remittances, when, for example, the impact of remittances on economic growth through its volatility is explored (World Bank, 2005) by

accelerating the development of the financial sector (Toxopeus and Lensink, 2008), or through the real exchange rate (Rajan and Subramanian, 2005). Moreover, remittances can indirectly affect economic growth through education, human capital, domestic investment rate, institutions, and other factors that are important determinants of output growth.

Emigrant remittances are an essential source of funding for many developing countries. Chami et al., (2005), Rao and Hassan, (2012), and Barajas et al., (2009), discuss the importance of remittances as a source of funding for developing countries. According to these authors, large inflows of remittances, as mentioned above, can be expected to have potentially significant effects on the growth rate of production capacity in remittance-recipient economies. Although a substantial portion of the inflows is due to altruistic motives for supporting the standard of living of family members, some are also motivated by monetary benefits and take advantage of the benefits and incentives offered by recipient countries. For example, nonresident deposits attract higher interest rates and are exempt from income tax in countries such as India and Pakistan (Rao and Hassan, 2012).

Remittances also have effects on growth and well-being. However, there is little agreement and scant information in the literature on the impact of international migration and remittances. Adams and Page, (2005); analyze a new data set on international migration, remittances, inequality, and poverty from 71 developing countries. They conclude that international migration and remittances have strong, statistically significant impact on poverty reduction in developing countries. In addition, studies in a larger sample of countries, such as Freund and Spatafora, (2008), found evidence that remittances can help improve a country's development prospects, maintain macroeconomic stability, mitigate adverse shocks' effects, and reduce poverty. According to the same study, remittances are a substantial foreign exchange source for many developing countries. In addition, they have proven to be much more stable and less cyclical than other sources.

As stated above, in addition to previous studies attempting to identify specific channels through which remittance inflows may affect growth, such as Dutch disease effects (Nikas and King, 2005), some studies discuss the direct impacts of remittances on growth through regression of the growth rate on remittances and a set of control variables. Chami et al., (2005), contrary to the general assumption in the literature and policymakers that remittances from immigrants play the same role in economic development as foreign direct investment and other capital flows; develop a remittance model based on the family economy, which implies that remittances are not profit-oriented, but are compensatory transfers and should have a negative correlation with GDP growth. They tested this model on a new remittance data panel and found a strong negative correlation between remittances and GDP growth. This suggests that remittances may not be intended to serve as a source of capital for economic development.

Faini, (2007), also uses the distance from major migrant destination countries as a cross-regression remittance tool, using a sample of 68 countries with average data from 1980 to 2004. The innovation in this study is that the author does not include the investment rate in the control variables because remittance flows could partially drive investments. In contrast to the previous study, the estimated total remittance ratio relative to GDP in Faini's, (2007), regression through ordinary least squares was positive and significant. However, when the regression was estimated with instrumental variables, the remittance rate coefficient lost statistical significance, although it remained positive. Zghidi et al., (2018), in their paper using the system generalized method of moments (system GMM), try to investigate the cause-and-effect relationships between

remittances, economic freedom, and economic growth in a panel of four North African countries (Tunisia, Morocco, Algeria, and Egypt) from 1980 to 2012. The authors find strong evidence for a positive link between remittances and economic growth. They also find that freedom is complementary to the effects of remittances, i.e., the effects are more pronounced in the presence of the variable of economic freedom.

Based on the above, the use of remittances in the country of origin of the migrant is the essence of the debate on migration and development in countries with large numbers of migrants. However, the causal relationship between productive remittance investments (in agriculture, industrial development, education, health, etc.) and unproductive investments (housing, consumption of luxury goods, etc.) is unclear and depends on the value judgments of development. Moreover, the automation of remittances distributed across hundreds of thousands of recipients where everyone makes their own decisions disables strategic planning for investing remittances in development priorities at the national level (Nikas and King, 2005). So, it can be concluded that how remittances will affect economic growth and development in each economy largely depends on complementary infrastructure, services, favorable physical conditions (especially for agriculture), and a stable political and financial environment (institutional capacity).

3. DATA AND METHODOLOGY OF EMPIRICAL RESEARCH

3.1.Data

This section describes the data used in the empirical literature, especially the measures for economic growth and the numerous control variables used in growth regressions. Our sample covers the 27 members of the European Union with annual data for the period 1995-2019. Although the criteria for entry and EU membership are the same and binding for all countries, there are still some specifics and differences between stakeholders. The selected group of countries includes countries from different levels of economic development, countries from the former socialist system, countries that are in transition, countries that have successfully overcome that process, and traditionally capitalist countries. The width and variety of the sample are an advantage when performing statistical calculations and allow obtaining statistically significant results.

The dependent variable is the economic growth of real GDP per capita at prices from 2015. Except for the institutional variable, the primary interest variable (remittances to GDP) and all other control variables are obtained from the World Bank's World Development Indicators database. In addition, the Economic Freedom Index (EFI) is taken from the Heritage Foundation database.

Remittances include personal transfers and employee benefits. Personal transfers consist of all current cash or in-kind transfers received from resident households to or from nonresident households. Thus, personal transfers include all current transfers between resident and nonresident individuals. Employee compensation refers to the income of customs, seasonal, and other short-term workers employed in nonresident economies and residents employed by nonresident entities. Personal remittance data to GDP is a set of two items: personal transfers and employee benefits expressed to the country's GDP.

In our models, the index of economic freedom is used to see the causal links between remittances, institutions, and economic growth and whether remittances and institutions are complementary. Economic freedom is a fundamental right of every human to exercise control over

their labor and property. In an economically free society, individuals can work, produce, consume, and invest in whatever way they want. In financially free communities, governments allow labor, capital, and goods to move freely and refrain from forcing or restricting freedoms beyond the borders necessary to protect and maintain freedom. As a result, economic freedom brings greater prosperity. The Index of Economic Freedom documents the positive relationship between economic freedom and various positive social and economic goals. For example, the ideals of economic freedom are strongly associated with healthier societies, cleaner environments, more incredible wealth per capita, human development, democracy, and the eradication of poverty.

The Heritage Foundation's Economic Freedom Index measures economic freedom based on quantitative and qualitative factors, grouped into four broad categories or pillars of economic freedom:

1. The rule of law (property rights, government integrity, judicial effectiveness);
2. Size of government (public spending, tax burden, fiscal health);
3. Regulatory efficiency (business freedom, labor freedom, monetary freedom);
4. Open markets (trade freedom, investment freedom, financial freedom).

Each of the twelve economic freedoms in these categories is rated on a scale from 0 to 100. The overall assessment of a country is performed with an average of these twelve economic freedoms. Our analysis uses the comprehensive evaluation of the index of economic freedom for each of the EU member states in the period 1995-to 2020.

Our basic model includes several explanatory variables that are considered in the literature to be familiar to most growth regressions. They are taken from the World Bank database:

- Gross fixed capital (% of GDP). Gross domestic fixed investments include land improvements (fences, ditches, drains, etc.), plants, machinery and equipment, and construction of roads, railways, and the like, including schools, hospital offices, private housing, and commercial and industrial facilities. A positive ratio is expected, as it has been shown that larger investment shares are positively related to economic growth (Bond et al., 2010).
- Trade (% of GDP) is the sum of exports and imports of goods and services measured as a share of gross domestic product. Usually, according to the literature, trade has a positive impact on economic growth (Were, 2015).
- Enrollment in higher education (% gross). The gross enrollment coefficient is the ratio of the total enrollment, regardless of age, to the population of the age group that officially corresponds to the displayed level of education. Tertiary education, whether with advanced qualifications or not, as a minimum requirement for admission, usually requires the successful completion of secondary education. Education at any level is expected to correlate with economic growth (Taşel and Bayarçelik, 2013) positively.
- The annual population growth rate for year t is an exponential growth rate of the middle-aged population from year t-1 to t, expressed as a percentage. The population is based on the de facto definition of population, which counts all inhabitants regardless of legal status or citizenship. Therefore, higher population growth rates lead to lower GDP per capita (Bucci, 2015).

3.2.Methodology

This section describes the methodology for estimating the impact of remittances on economic growth in an expanded growth model. Empirical studies of economic growth provide evidence of conditional convergence of factors, several of which are related to institutions. Our specification is based on previous empirical works of Zghidi et al., (2018). First, we consider the direct effect of remittances on economic growth and evaluate the following equation:

$$GDP_{i,t} = \alpha_0 + \alpha_1 \times GDP_{i,t-1} + \alpha_2 \times remittances_{i,t} + \alpha_3 \times X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (1)$$

where $GDP_{i,t}$ denotes the logarithm of the level of GDP per capita in country i at the end of period t, $remittances_{i,t}$ refers to remittances as a percentage of GDP, $X_{i,t}$, in turn, is a matrix of control variables described above in the data section; μ_t is a time specific effect, η_i is an unobserved fixed effect, and $\varepsilon_{i,t}$ is the error term. This equation tests the marginal impact of remittances on economic growth, i.e., whether α_2 is statistically significant or not.

Because remittances can affect economic activity through multiple channels, in the second set of regressions, we examine whether the institutional quality of EU countries measured by the index of economic freedom plays a role in transmitting the effects of remittances to economic activity. The hypothesis we want to test is whether the level of the economic freedom index in the host country affects remittances on economic growth. To this end, in the second equation, we add the index of economic freedom.

$$GDP_{i,t} = \alpha_0 + \alpha_1 \times GDP_{i,t-1} + \alpha_2 \times remittances_{i,t} + \alpha_3 \times index\ of\ economic\ freedom_{i,t} + \alpha_4 \times X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (2)$$

Furthermore, to see if there are complementary relationships between these two variables, i.e., whether they complement each other or not, a third equation is evaluated by adding explanatory variable such as an interaction term constructed as a product of remittances and the index of economic freedom: $remittances \times index\ of\ economic\ freedom$.

$$GDP_{i,t} = \alpha_0 + \alpha_1 \times GDP_{i,t-1} + \alpha_2 \times (remittances_{i,t} \times index\ of\ economic\ freedom_{i,t}) + \alpha_3 \times X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (3)$$

A positive coefficient before this article shows that remittances and the quality of institutions are complementary and that the effects of remittance growth are strengthened in suitable political environments. On the other hand, a negative coefficient before this term reveals that remittances and institutional quality are used as a substitute for promoting economic growth (Zghidi et al., 2018).

The above equations are evaluated using the Generalized Method of Moments. The simplest and easiest way to estimate the above equations is to use the least-squares method. However, since this method assumes that the explanatory variables are strictly exogenous, i.e., that they are not related to the error term, the estimations with this method are biased and inconsistent. One way to deal with this problem is the so-called endogenousness of variables is using instrumental variables that are related to the independent variables in the equation but are not related to the error term. GMM solves this endogenous problem by using past values from the included independent variables as instruments for endogenous correction (Hall, 2004).

In evaluating models using GMM, it is recommended that the variables be stationary at the level. However, if the variables are stationed after the first differentiation, it can be a long-term relationship. The error correction method (VECM) can be used in that case. In our analysis, all the variables we use are stationary at the level, i.e., integrated from zero-order, I(0) (Table 1).

Table 1. Results for the integrative characteristics of the variables used in the model

Variable	ADF t-statistics	p-value
Logarithm of GDP per capita	-6,84652	0,0000
Remittances (% of GDP)	-2,58636	0,0048
Index of economic freedom	-3,06015	0,0011
Gross fixed capital (% of GDP)	-3,11454	0,0009
Trade (% of GDP)	-3,98013	0,0000
Enrollment in higher education (% gross)	-3,32282	0,0004
Annual population growth rate	-3,15333	0,0008

Source: Authors' calculations.

3.3.Results

In this section, we present the results of our research on the impact of remittances on economic growth. As described in the methodology above, we first evaluate the growth model following the standard variables listed and explained earlier. We then include the institutional variable through the Economic Freedom Index calculated by the Heritage Foundation. In the last equation, however, we include the interaction term constructed as the product of remittances and the index of economic freedom: $remittances \times index\ of\ economic\ freedom$ (Table 2).

Table 2. Results from GMM estimation

Variable	(1)	(2)	(3)
Logarithm of GDP per capita $(t-1)$	0,846697***	0,790448***	0,838260***
Remittances (% of GDP)	0,008772***	0,008841***	-
Index of Economic Freedom	-	0,002193***	-
$\boldsymbol{Remittances \times Index\ of\ Economic\ Freedom}$	-	-	0,000126***
Gross fixed capital (% of GDP)	0,003257***	0,004016***	0,004372***
Trade (% of GDP)	0,009172***	0,001005***	0,000871***
Enrollment in higher education (% gross)	0,000618**	0,000800**	0,000540*
Annual population growth rate	0,001128***	0,011929***	0,008882***
AR(2) test	0,5955	0,9999	-
p-value of Sargan test	0,313014	0,228213	0,209170

*Source: Authors' calculations. *, ** and *** denotes statistical significance at 10, 5 and 1 % levels, respectively.*

The results show that the primary variable of interest, remittances from migrants in terms of GDP, are positive and statistically significant in all columns of Table 2, suggesting that

remittances contribute significantly to economic growth in EU countries. The second column shows that, although not much different, the impact is more pronounced when the variable for institutional development is included. The first column suggests that the remittance increase of 1 pp. in the structure of GDP leads to an increase in the growth rate of 0.8772%. While in column 2, the increase in remittances by 1 pp. in the structure of GDP leads to an increase in the GDP growth rate by 0.8841%. This conclusion is also consistent with previous empirical studies, such as the work of (Zghidi et al., 2018), (Borja and Hall, 2018).

The role of institutional development is shown in column 2 of Table 2. We investigate whether the host country's institutional development affects the specific uses of remittances and their capacity to influence growth. The coefficient before the index of economic freedom has a positive sign. It is statistically significant at 1% significance level, implying that economic growth is stronger when the index of economic freedom is high because the quality of institutions makes investments much more productive. This finding is consistent with research conducted by (Ramirez, 2013).

Our results also confirm that the higher the index of economic freedom, the greater the advantage of remittance inflows. In the second column, many variables' coefficients improve by entering the index of economic freedom in the model. Additionally, the estimated regressions pass both specification tests. The null hypothesis that there is no second-order serial correlation cannot be ruled out at the 5% level. The instruments used in the analysis are valid, the p-values of the Sargan tests are higher than 5% and the null hypotheses that claim this cannot be ruled out.

Unlike the previous two columns, the third column shows the regression results based on the article on the interaction between remittances and the economic freedom index. As mentioned earlier, if a member has a positive coefficient, it would mean that the effect of remittances on economic growth is increasing. In addition, we note that the sign of the article coefficient for the interaction between remittances and the degree of economic freedom is positive, which means that remittances and the degree of economic freedom complement each other. This evidence supports the argument that the effect of remittances on economic growth depends on whether countries' institutions are suitable for the productive use of remittances.

4. CONCLUSION

The paper elaborated the impact of remittances on economic growth through the institutional quality channel of the remittance recipient country of the EU countries. In order to avoid the problem of endogeneity of the variables used, the models are estimated using the generalized method of moments. GMM solves this endogenous problem by using past values of the included independent variables as instruments for endogenous correction.

This paper considered that the institutional capacity of the recipient country is one of the most important channels through which the effects of remittances on economic growth are transferred, in addition to consumption, investment, trade, etc. Therefore, to avoid the bias that could be created due to a missed variable, this paper examined the remittance-growth relationship of the case in EU countries through the impact of institutional quality. The Heritage Foundation's Index of Economic Freedom was used as an indicator of the institutional quality of the remittance country. The index measures economic freedom based on quantitative and qualitative factors,

grouped into four broad categories of pillars and economic freedom: the rule of law, size of government, regulatory efficiency, and open markets.

In the estimated models, gross fixed capital (% of GDP), trade (% of GDP), enrollment in higher education (% gross), and the annual population growth rate for the year are taken as additional explanatory variables in addition to remittances (% of GDP). The first model was evaluated without the institutional capacity variable. The second model includes the institutional variable to see institutions' impact on economic growth determinants. The third model includes the interaction term between remittances and institutions to determine whether they complement each other in the growth process.

The results show that the primary variable of interest, remittances to GDP, has a positive and statistically significant effect in the three estimated models, suggesting that remittances contribute significantly to economic growth in EU countries. Furthermore, the second model concludes that the coefficient before the index of economic freedom carries a positive sign and is statistically significant, implying that economic growth is stronger when the index of economic freedom is high because the quality of institutions makes investments more productive. Finally, the positive and significant coefficient before the interaction term in the third model confirms that the higher the index of economic freedom, the greater the advantage of remittances.

The results of this paper could also have significant implications for policymakers. Because institutions appear to be important to the way remittances are used, the best way for governments to ensure that remittances contribute to positive economic growth is to foster better-quality institutions.

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